

1. (Original) A radio access network comprising:

plural radio network controllers including a first radio network controller, the plural radio network controllers being situated to establish one or more overlapping routing areas, each overlapping routing area comprising a cell controlled by the first radio network controller and at least one cell controlled by another of the plural radio network controllers;

wherein for signaling the first radio network controller need only store network addresses for:

any of the plural radio network controllers which controls a cell in any overlapping routing area; and

any of the plural radio network controllers which functions as a serving radio network controller for a connection for which the first radio network controller functions as a drift radio network controller.

2. (Original) The apparatus of claim 1, further comprising a signaling network connecting the plural radio network controllers, wherein one of the plural radio network controllers is a serving radio network controller which controls a connection between a core network and a user equipment unit, wherein when the user equipment unit moves from a first routing area to a second routing area, the second routing area being an overlapping routing area in which a second radio network controller also controls cells, the first radio network controller sends, in a signaling message to a serving radio network controller, both (1) an address of the first radio network controller, and (2) the address of the second radio network controller, thereby enabling the serving radio network controller to page the user equipment unit throughout the overlapping routing area.

RUNE
Serial No. 09/638,858

Atty Dkt: 2380-163
Art Unit: 2664

3. (Original) A radio network controller for a radio access telecommunications network which uses, as criteria for which other radio network controllers to store addresses, only:

those other radio network controllers which controls cells in overlapping routing area(s), the overlapping routing area(s) also having at least one cell controlled by the radio network controller; and

those other radio network controllers which function as a serving radio network controller for a connection for which the radio network controller functions as a drift radio network controller.

4. (Original) The apparatus of claim 3, wherein when the radio network controller serves as a drift radio network controller, and wherein when an user equipment unit moves from a first routing area to a second routing area, the second routing area being an overlapping routing area, the radio network controller sends, in a signaling message to a serving radio network controller, both (1) an address of the radio network controller, and (2) the address of any other radio network controller having cells in the overlapping routing area, thereby enabling the serving radio network controller to page the user equipment unit throughout the overlapping routing area.

5. (Original) A method of operating a radio access network comprising:
providing plural radio network controllers;

providing one or more overlapping routing areas, each overlapping routing area comprising a cell controlled by a first radio network controller and a cell controlled by another of the plural radio network controllers;

regarding addresses of other radio network controllers in the radio access network, requiring the first radio network controller, for signaling purposes, only to store network addresses for:

any of the plural radio network controllers which controls a cell in the one or more overlapping routing area;

any of the plural radio network controllers which functions as a serving radio network controller for a connection for which the first radio network controller functions as a drift radio network controller.

RUNE
Serial No. 09/638,858

Atty Dkt: 2380-163
Art Unit: 2664

6. (Original) The method of claim 1, wherein one of the plural radio network controllers is a serving radio network controller which controls a connection between a core network and a user equipment unit, wherein when the user equipment unit moves from a first routing area to a second routing area, the second routing area being an overlapping routing area in which a second radio network controller also controls cells, the method further comprising:

the first radio network controller sending, in a signaling message to a serving radio network controller, both (1) an address of the first radio network controller, and (2) the address of the second radio network controller, thereby enabling the serving radio network controller to page the user equipment unit throughout the overlapping routing area.

7. (Currently Amended) A radio access network comprising:

plural radio network controllers including a first radio network controller, the plural radio network controllers being situated to establish one or more overlapping routing areas, each overlapping routing area comprising a cell controlled by the first radio network controller and at least one cell controlled by another of the plural radio network controllers;

wherein for signaling a routing area update request message for a user equipment unit which is in a low activity state, the first radio network controller need only store network addresses for:

any of the plural radio network controllers which controls a cell in any overlapping routing area; and

any of the plural radio network controllers which functions as a serving radio network controller for a connection for which the first radio network controller functions as a drift radio network controller.

8. (Previously Presented) A radio access network of claim 7, further comprising a signaling network connecting the plural radio network controllers, wherein one of the plural radio network controllers is a serving radio network controller which controls a

RUNE
Serial No. 09/638,858

Atty Dkt: 2380-163
Art Unit: 2664

connection between a core network and a user equipment unit, wherein when the user equipment unit moves from a first routing area to a second routing area, the second routing area being an overlapping routing area in which a second radio network controller also controls cells, the first radio network controller sends, in a signaling message to a serving radio network controller, both (1) an address of the first radio network controller, and (2) the address of the second radio network controller, thereby enabling the serving radio network controller to page the user equipment unit throughout the overlapping routing area.

9. (Currently Amended) A radio network controller for a radio access telecommunications network which uses, as criteria for which other radio network controllers to store addresses for use in signaling a routing area update request message ~~for a user equipment unit which is in a low activity state, only:~~

those other radio network controllers which controls cells in overlapping routing area(s), the overlapping routing area(s) also having at least one cell controlled by the radio network controller; and

those other radio network controllers which function as a serving radio network controller for a connection for which the radio network controller functions as a drift radio network controller

10. (Previously Presented) The apparatus of claim 9, wherein when the radio network controller serves as a drift radio network controller, and wherein when an user equipment unit moves from a first routing area to a second routing area, the second routing area being an overlapping routing area, the radio network controller sends, in a signaling message to a serving radio network controller, both (1) an address of the radio network controller, and (2) the address of any other radio network controller having cells in the overlapping routing area, thereby enabling the serving radio network controller to page the user equipment unit throughout the overlapping routing area.

11. (Currently Amended) A method of operating a radio access network comprising:

providing plural radio network controllers;

RUNE
Serial No. 09/638,858

Atty Dkt: 2380-163
Art Unit: 2664

providing one or more overlapping routing areas, each overlapping routing area comprising a cell controlled by a first radio network controller and a cell controlled by another of the plural radio network controllers;

regarding addresses of other radio network controllers in the radio access network, requiring the first radio network controller, for signaling a routing area update request message for a user equipment unit which is in a low activity state, only to store network addresses for:

any of the plural radio network controllers which controls a cell in the one or more overlapping routing area;

any of the plural radio network controllers which functions as a serving radio network controller for a connection for which the first radio network controller functions as a drift radio network controller.

12. (Previously Presented) The method of claim 11, wherein one of the plural radio network controllers is a serving radio network controller which controls a connection between a core network and a user equipment unit, wherein when the user equipment unit moves from a first routing area to a second routing area, the second routing area being an overlapping routing area in which a second radio network controller also controls cells, the method further comprising:

the first radio network controller sending, in a signaling message to a serving radio network controller, both (1) an address of the first radio network controller, and (2) the address of the second radio network controller, thereby enabling the serving radio network controller to page the user equipment unit throughout the overlapping routing area.

13. (New) The apparatus of claim 1, wherein the first radio network controller performs the signaling when a user equipment unit performs a routing area update and wherein the first radio network controller includes the stored network addresses in the signaling.

RUNE
Serial No. 09/638,858

Atty Dkt: 2380-163
Art Unit: 2664

14. (New) The method of claim 3, wherein the criteria is for storage of addresses in conjunction with signaling to be performed when a user equipment unit performs a routing area update.

15. (New) The method of claim 5, further comprising the first radio network controller performs a signaling of the stored network addresses when a user equipment unit performs a routing area update.

16. (New) The apparatus of claim 7, wherein the signaling of the routing area update request message is prompted by a user equipment unit performing a routing area update.

17. (New) The method of claim 9, wherein the signaling of the routing area update request message is prompted by a user equipment unit performing a routing area update.

18. (New) The method of claim 11, wherein the signaling of the routing area update request message is prompted by a user equipment unit performing a routing area update.